Panasonic

Basic Owner's Manual

Digital Camera/
Lens Kit

Model No. DMC-GF6K

Please read these instructions carefully before using this product, and save this manual for future use.

More detailed instructions on the operation of this camera are contained in "Owner's Manual for advanced features (PDF format)" in the supplied CD-ROM. Install it on your PC to read it.

Register online at www.panasonic.com/register (U.S. customers only)

For USA and Puerto Rico assistance, please call: 1-800-211-PANA(7262) or, contact us via the web at: http://www.panasonic.com/contactinfo

BC

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P

Dear Customer,

Thank you for choosing Panasonic!

You have purchased one of the most sophisticated and reliable products on the market today. Used properly, we're sure it will bring you and your family years of enjoyment. Please take time to fill in the information below. The serial number is on the tag located on the underside of your camera. Be sure to **retain this manual** as your convenient camera information source.

Date of Purchase	Dealer Phone No.
Dealer Purchased From	Model No.
Dealer Address	Serial No.

Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in this Owner's Manual.

Carefully observe copyright laws.

- Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

Information for Your Safety

WARNING:

To reduce the risk of fire, electric shock or product damage,

- **Do not expose this unit to rain, moisture, dripping or splashing.**
- **Use only the recommended accessories.**
- **Do not remove covers.**
- **Do not repair this unit by yourself. Refer servicing to qualified service personnel.**

The socket outlet shall be installed near the equipment and shall be easily accessible.

■ **Product identification marking**

Product	Location
Digital Camera	Bottom
Battery charger	Bottom

FCC Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, follow the attached installation instructions and use only shielded interface cables with ferrite core when connecting to computer or peripheral devices.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Declaration of Conformity
Trade Name: Panasonic
Model No.: DMC-GF6
Responsible Party: Panasonic Corporation of North America
One Panasonic Way, Secaucus, NJ 07094
Support Contact: Panasonic Consumer Marketing Company of North America
1-800-211-PANA (7262)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Certification and Compliance

See Camera for the certification and compliance mark specific to that device.

1 **Select [Wi-Fi] in the [Setup] menu.**
2 **Select [Wi-Fi Setup] in the [Wi-Fi] menu.**
3 **Press ▲/▼ to select [Approved Regulations], and then press [MENU/SET].**

Contains FCC ID: VPYLBXN604

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65.
This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

■ About the battery pack

CAUTION

Battery pack (Lithium ion battery pack)

- Use the specified unit to recharge the battery pack.
- Do not use the battery pack with equipment other than the specified unit.
- Do not get dirt, sand, liquids, or other foreign matter on the terminals.
- Do not touch the plug terminals (+ and −) with metal objects.
- Do not disassemble, remodel, heat or throw into fire.

If any electrolyte should come into contact with your hands or clothes, wash it off thoroughly with water.
If any electrolyte should come into contact with your eyes, never rub the eyes. Rinse eyes thoroughly with water, and then consult a doctor.

CAUTION

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

- Do not heat or expose to flame.
- Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.

Warning

Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C (140 °F) or incinerate.

■ About the battery charger

CAUTION!

To reduce the risk of fire, electric shock or product damage,

- **Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.**

Battery charger

This battery charger operates on AC between 110 V and 240 V.
But

- In the U.S.A. and Canada, the battery charger must be connected to a 120 V AC power supply only.
- When connecting to an AC supply outside of the U.S.A. or Canada, use a plug adaptor to suit the AC outlet configuration.

■ Cautions for Use

- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
- Always use a genuine Panasonic HDMI mini cable (RP-CHEM15, RP-CHEM30: optional). Part numbers: RP-CHEM15 (1.5 m) (5 feet), RP-CHEM30 (3.0 m) (10 feet)
- Always use a genuine Panasonic AV cable (DMW-AVC1: optional).

Keep this unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).

- If you use this unit on top of or near a TV, the pictures and/or sound on this unit may be disrupted by electromagnetic wave radiation.
- Do not use this unit near cell phones because doing so may result in noise adversely affecting the pictures and/or sound.
- Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by microprocessors may adversely affect this unit, disturbing the pictures and/or sound.
- If this unit is adversely affected by electromagnetic equipment and stops functioning properly, turn this unit off and remove the battery or disconnect AC adaptor (DMW-AC8PP: optional). Then reinsert the battery or reconnect AC adaptor and turn this unit on.

Do not use this unit near radio transmitters or high-voltage lines.

- If you record near radio transmitters or high-voltage lines, the recorded pictures and/or sound may be adversely affected.

-If you see this symbol-

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.
If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

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Reading the Owner's Manual (PDF format)

More detailed instructions on the operation of this camera are contained in "Owner's Manual for advanced features (PDF format)" in the supplied CD-ROM. Install it on your PC to read it.

■ For Windows

1 **Turn the PC on and insert the CD-ROM containing the Owner's Manual (supplied).**

2 **Select the desired language and then click [Owner's Manual] to install.**

3 **Double click the "Owner's Manual" shortcut icon on the desktop.**

■ When the Owner's Manual (PDF format) will not open

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Owner's Manual (PDF format).

- You can download and install a version of Adobe Reader that you can use with your OS from the following Web Site.
  http://get.adobe.com/reader/otherversions

■ To uninstall the Owner's Manual (PDF format)

Delete the PDF file from the "Program Files\Panasonic\Lumix\" folder.

■ For Mac

1 **Turn the PC on and insert the CD-ROM containing the Owner's Manual (supplied).**

2 **Open the "Manual" folder in the CD-ROM and then copy the PDF file with the desired language inside the folder.**

3 **Double click the PDF file to open it.**

Care of the camera

Do not subject to strong vibration, shock, or pressure.

- The lens, monitor, or external case may be damaged if used in the following conditions. It may also malfunction or image may not be recorded if you:
  - Drop or hit the camera.
  - Press hard on the lens or the monitor.

This camera is not dust/drip/water proof.
Avoid using the camera in places with a lot of dust, water, sand, etc.

- Liquid, sand and other foreign material may get into the space around the lens, buttons, etc. Be particularly careful since it may not just cause malfunctions, but it may also become irreparable.
  - Places with a lot of sand or dust.
  - Places where water can come into contact with this unit, such as when using it on a rainy day or at the beach.

Do not place your hands inside the mount of the digital camera body. Since the sensor unit is a precision apparatus, it may cause a malfunction or damage.

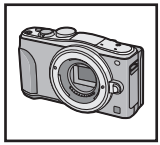
■ About Condensation (When the lens or monitor is fogged up)

- Condensation occurs when the ambient temperature or humidity changes. Be careful of condensation since it causes lens and monitor stains, fungus and camera malfunction.
- If condensation occurs, turn the camera off and leave it for about 2 hours. The fog will disappear naturally when the temperature of the camera becomes close to the ambient temperature.

Standard Accessories

Check that all the accessories are supplied before using the camera.
Product numbers correct as of March 2013. These may be subject to change.

Digital Camera Body
(This is referred to as **camera body** in this Owner's Manual.)



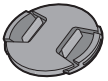
(○: Included, —: Not included)

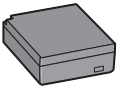
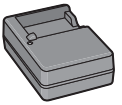
		DMC-GF6K
1	Interchangeable Lens*1	○*3
2	Lens Hood	○
3	Lens Cap	○*2

4 Battery Pack
(Indicated as **battery pack** or **battery** in the text)
Charge the battery before use.
5 Battery Charger
(Indicated as **battery charger** or **charger** in the text)
6 USB Connection Cable
7 CD-ROM
• Software:
Use it to install the software to your PC.
8 CD-ROM
• Owner's Manual for advanced features:
Use it to install to your PC.
9 Shoulder Strap

*1 This is referred to as **lens** in this Owner's Manual.
*2 This is attached to the interchangeable lens at the time of purchase.
*3 This is attached to the camera body at the time of purchase.

• SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as **card** in the text.
• **The card is optional.**
• Description in this Owner's Manual is based on the interchangeable lens (H-FS1442A).
• If any accessories are lost, customers should contact Panasonic's parts department at 1-800-833-9626 for further information about obtaining replacement parts.

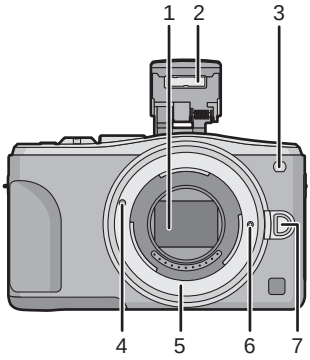
	DMC-GF6K
1	H-FS1442A
2	VYC1113
3	 VYF3510

4  DMW-BLG10PP	7
5  DE-A99B	8 VFF1199
6 K1HY08YY0034	9 VFC4765

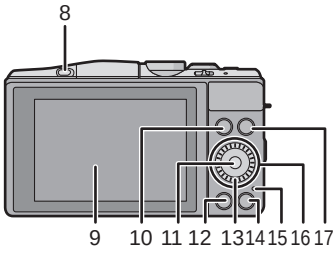
Names and Functions of Components

■ Camera body

1 Sensor
2 Flash
3 Self-timer indicator/
AF Assist Lamp
4 Lens fitting mark
5 Mount
6 Lens lock pin
7 Lens release button



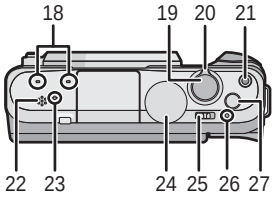
8 Flash open button
• The flash opens, and recording with the flash becomes possible.
9 Touch screen/monitor
10 [▶] (Playback) button
11 [MENU/SET] button
12 [Q.MENU] button/[Fn1] button/
[🗑/↩] (Delete/Cancel) button
13 Control dial
14 [Wi-Fi] button/[Fn2] button
15 Wi-Fi® connection lamp
16 Cursor buttons
▲/Exposure Compensation button
►/WB (White Balance)
◄/AF Mode button
▼/[Drive Mode] button
This button in picture record mode will allow the user to select between the following options.
Single/Burst/Auto bracket/Self-timer
17 [DISP.] button
• Each time this is pressed, the display on the monitor is switched.



18 Stereo microphone
- Be careful not to cover the microphone with your finger. Doing so may make sound difficult to record.

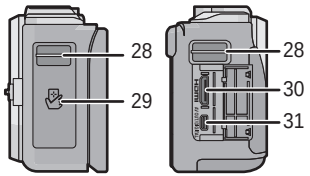
19 Shutter button
20 Function lever
21 Motion picture button
22 Speaker
- Be careful not to cover the speaker with your finger. Doing so may make sound difficult to hear.

23 Focus distance reference mark
24 Mode dial
25 Camera ON/OFF switch
26 Status indicator
27 Intelligent Auto button



28 Shoulder strap eyelet
- Be sure to attach the shoulder strap when using the camera to ensure that you will not drop it.

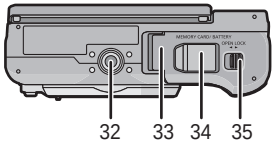
29 NFC antenna [ ]
30 [HDMI] socket
31 [AV OUT/DIGITAL] socket



32 Tripod mount
- A tripod with a screw length of 5.5 mm (0.22 inch) or more may damage this unit if attached.

33 Card/Battery door
34 DC coupler cover
- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC11: optional) and AC adaptor (DMW-AC8PP: optional) are used.
- Always use a genuine Panasonic AC adaptor (DMW-AC8PP: optional).
- It is recommended to use a fully charged battery or AC adaptor when recording motion pictures.
- If while recording motion pictures using the AC adaptor and the power supply is cut off due to a power outage or if the AC adaptor is disconnected etc., the motion picture will not be recorded.

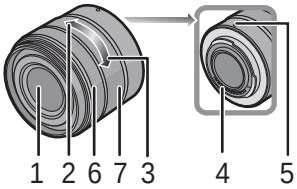
35 Release lever



■ Lens

1 Lens surface
2 Tele
3 Wide
4 Contact point
5 Lens fitting mark
6 Focus ring
7 Zoom ring

H-FS1442A



Touch screen

Touch panel of this unit is capacitive. Touch the panel directly with your bare finger.

■ Touch

To touch and release the touch screen.
Use for selecting items or icons.

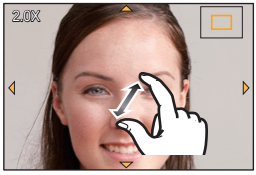
- When selecting features using the touch screen, be sure to touch the center of the desired icon.

■ Drag

A movement without releasing the touch screen.
This is used to move the AF area, operate the slide bar, etc.
This can also be used to move to the next image during playback, etc.

■ Pinch (enlarge/reduce)

Pinch the touch panel apart (enlarge) or together (reduce) with two fingers.
Use to enlarge/reduce the played back images or AF area.



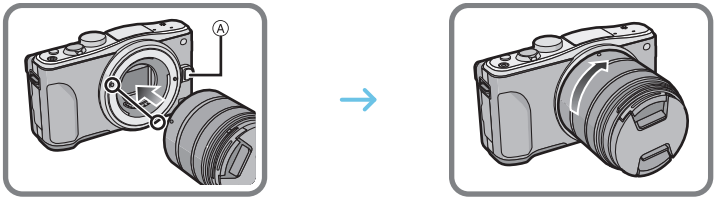
Preparation

• Check that the camera is turned off.

Changing the Lens

• Change lenses where there is not a lot of dirt or dust.

Attaching the lens

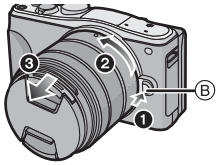


• Do not press the lens release button Ⓐ when you attach a lens.

■ Detaching the lens

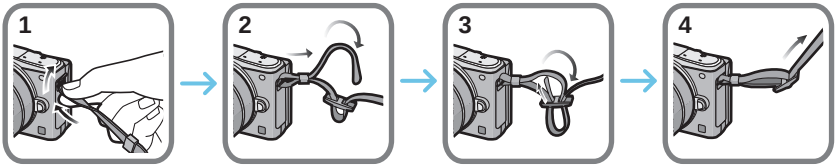
1 **Attach the lens cap.**

2 **While pressing on the lens release button Ⓑ, rotate the lens toward the arrow until it stops and then remove.**



Attaching the Shoulder Strap

• We recommend attaching the shoulder strap when using the camera to prevent it from dropping.



• Perform steps **1** to **4** and then attach the other side of the shoulder strap.

• Use the shoulder strap around your shoulder.
– Do not wrap the strap around your neck.
– It may result in injury or accident.
• Do not leave the shoulder strap where an infant can reach it.
– It may result in an accident by mistakenly wrapping around the neck.

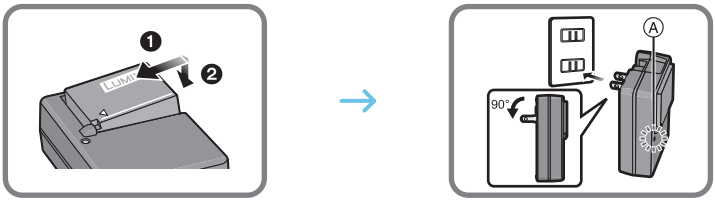
Charging the Battery

The battery that can be used with this unit is DMW-BLG10PP.

1 **Attach the battery paying attention to the direction of the battery.**

2 **Connect the charger to the electrical outlet.**

- The [CHARGE] indicator Ⓐ lights up and charging begins.



■ About the [CHARGE] indicator

The [CHARGE] indicator turns on:

The [CHARGE] indicator is turned on during charging.

The [CHARGE] indicator turns off:

The [CHARGE] indicator will turn off once the charging has completed without any problem. (Disconnect the charger from the electrical socket and detach the battery after charging is completed.)

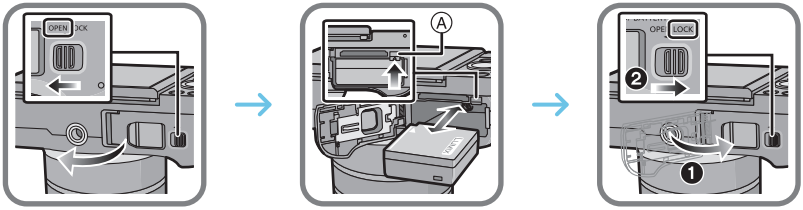
■ Charging time

Charging time	Approx. 190 min

• The indicated charging time is for when the battery has been discharged completely. The charging time may vary depending on how the battery has been used. The charging time for the battery in hot/cold environments or a battery that has not been used for a long time may be longer than normal.

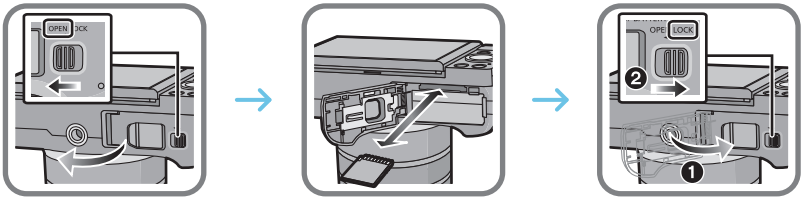
Inserting/Removing the Battery

- **Always use genuine Panasonic batteries (DMW-BLG10PP).**
- **If you use other batteries, we cannot guarantee the quality of this product.**



- Being careful about the battery orientation, insert all the way until you hear a locking sound and then check that it is locked by lever Ⓐ.
  Pull the lever Ⓐ in the direction of the arrow to remove the battery.

Inserting/Removing the Card (Optional)



- Push it securely all the way until you hear a “click” while being careful about the direction in which you insert it.
  To remove the card, push the card until it clicks, then pull the card out upright.

■ About cards that can be used with this unit

SD Memory Card (8 MB to 2 GB)
SDHC Memory Card (4 GB to 32 GB)
SDXC Memory Card (48 GB, 64 GB)

■ About the motion picture recording and SD speed class

Confirm the SD Speed Class (the speed standard regarding continuous writing) on a card label etc. when you record a motion picture. Use a card with SD Speed Class with “Class 4” or more for [AVCHD]/[MP4] motion picture recording.

e.g.:

CLASS 4 4

- Please confirm the latest information on the following website.
  http://panasonic.jp/support/global/cs/dsc/
  (This Site is English only.)

- Keep the Memory Card out of reach of children to prevent swallowing.

Formatting the card (initialization)

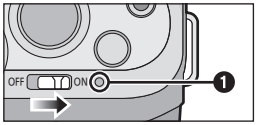
Format the card before recording a picture with this unit.
Since data cannot be recovered after formatting, make sure to back up necessary data in advance.

Select [Format] in the [Setup] menu.
• Confirmation screen is displayed. It is executed when [Yes] is selected.

Setting Date/Time (Clock Set)

• The clock is not set when the camera is shipped.

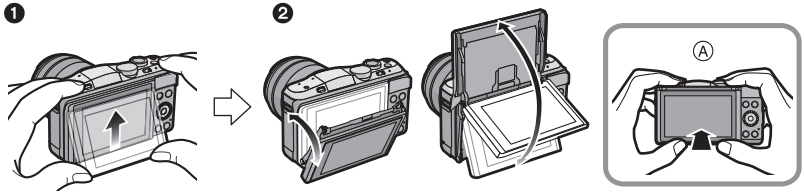
1 **Turn the camera on.**
• The status indicator ❶ lights when you turn this unit on.



2 **Touch [Clock Set].**

3 **Touch the items you wish to set (Year/Month/Day/Hours/Minutes), and set using [^]/[v].**
4 **Touch [Set] to set.**
5 **Touch [Set] in the confirmation screen.**

Adjusting the monitor angle



Ⓐ When closing
❶ Flip up the bottom of the monitor lightly to open.
❷ Adjust the angle of the monitor.

• Be careful not to catch your finger, etc. in the monitor.
• When rotating the monitor, be careful not to apply too much force. This may cause scratches and malfunctions.
• When not using this unit, close the monitor completely back to the original position.

Setting the Menu

Setting menu items

1 **Press [MENU/SET].**

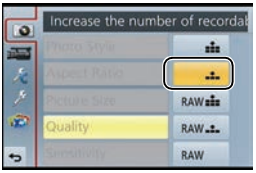
- The top menu screen is displayed.

2 **Touch the menu icon.**

3 **Touch the menu item.**

4 **Touch the Setting to set.**

- Depending on the menu item, its setting may not appear or it may be displayed in a different way.



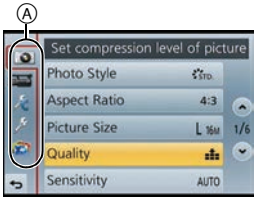
■ Close the menu

Touch [⮌] or press the shutter button halfway.

■ Switching to other menus

e.g.: Switching to the [Setup] menu from [Rec] menu.

Touch [🔧] or another of the menu toggle icons Ⓐ.

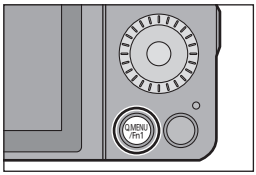


Calling frequently-used menus instantly (Quick Menu)

By using the Quick Menu, some of the menu settings can be easily found.
• The features that can be adjusted using Quick Menu are determined by the mode or a display style the camera is in.

[Q.MENU]/[Fn1] button can be used in two ways, as [Q.MENU] or as [Fn1] (function 1). At the time of purchase, it is initially set to [Q.MENU].

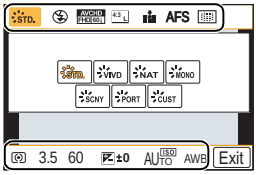
1 **Press [Q.MENU] to display the Quick Menu.**



2 **Touch the menu item.**

3 **Touch the setting.**

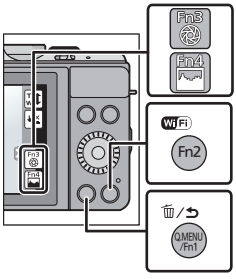
4 **Touch [Exit] to exit menu once the setting is completed.**



- You can close the menu by pressing the shutter button halfway.

Assigning frequently used functions to the buttons (function buttons)

You can assign recording functions, etc. to specific buttons and icons.
To use those functions, press [Fn1] or [Fn2] or touch [Fn3] or [Fn4].



1 **Select the function buttons you want to assign the function from the [Fn Button Set] in the [Custom] menu.**

2 **Touch the function you want to assign.**

- Assign your favorite functions to each of the function buttons.
- Exit the menu after it is set.

Taking a Still picture

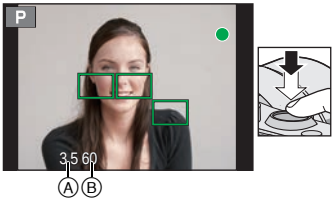
• Set the drive mode to [▭] (single) by pressing ▼(🔁 ⏲).

1 Select the Recording Mode.

2 Press the shutter button halfway to focus.

Ⓐ Aperture value
Ⓑ Shutter speed

• Aperture value and shutter speed are displayed. (It will flash in red if the correct exposure is not achieved, except when set to flash.)
• **When the image is correctly focused, the picture will be taken, since the [Focus/ Release Priority] is set initially to [FOCUS].**



3 Press the shutter button fully (push it in further), and take the picture.

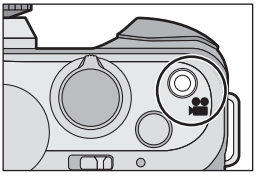
Recording Motion Picture

This camera can record full high definition motion pictures compatible with the AVCHD format or motion pictures recorded in MP4.
Audio will be recorded in stereo.

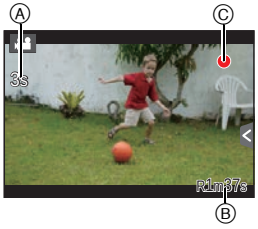
1 Start recording by pressing the motion picture button.

Ⓐ Elapsed recording time
Ⓑ Available recording time

• The recording state indicator (red) Ⓒ will flash while recording motion pictures.



2 Stop the recording by pressing the motion picture button again.

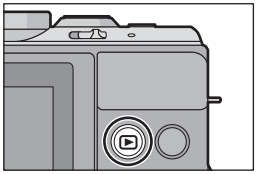


• Maximum time to record motion pictures continuously with [MP4] is 29 minutes 59 seconds or up to 4 GB. (For [FHD/30p] in [MP4] format, the file size is large and so the recordable time will drop below 29 minutes 59 seconds.)

Playing Back Pictures/Motion Pictures

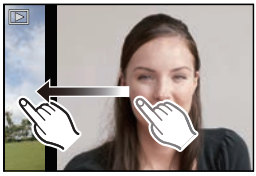
Playing Back Pictures

1 **Press [▶].**



2 **Forward or rewind the image by dragging the screen horizontally.**

Forward: drag from right to left
Rewind: drag from left to right



Playing Back Motion Pictures

This unit was designed to play motion pictures using the AVCHD, MP4 and QuickTime Motion JPEG formats.

In Playback Mode, select a picture with the motion picture icon ([🎥]) and touch [▶] in the middle of the screen.

Ⓐ Motion picture recording time

• After playback starts, the elapsed playback time is displayed on the screen.

■ Operations during Motion Picture Playback

▶/❚❚	▲	Play/Pause	■	▼	Stop
◀◀	◀	Fast rewind	▶▶	▶	Fast forward
◀❚❚		Frame-by-frame rewind (while pausing)	❚❚▶		Frame-by-frame forward (while pausing)
−	**Control dial (left)**	Reduce volume level	+	**Control dial (right)**	Increase volume level

Deleting Pictures

Once deleted, pictures cannot be recovered.

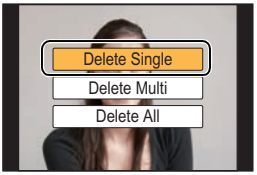
To delete a single picture

1 **In Playback Mode, select the picture to delete and touch [🗑].**

- The same operation can be performed by pressing [🗑/↩].

2 **Touch [Delete Single].**

- Confirmation screen is displayed.
  Picture is deleted by selecting [Yes].



To delete multiple pictures (up to 100*) or all the pictures

* Picture groups are treated as a single picture. (All the pictures in the selected picture group will be deleted.)

1 **In Playback Mode, touch [🗑].**

2 **Touch [Delete Multi] or [Delete All].**

- [Delete All] → Confirmation screen is displayed.
  Pictures are deleted by selecting [Yes].
- It is possible to delete all pictures except the ones set as favorite when [All Delete Except Favorite] is selected with the [Delete All] set.

3 **(When [Delete Multi] is selected) Touch the picture to be deleted.** (repeat this step)

- [🗑] appears on the selected pictures. Touching again cancels the setting.

4 **(When [Delete Multi] is selected) Touch [OK].**

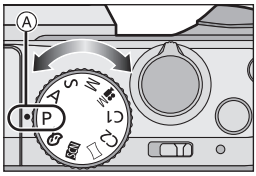
- Confirmation screen is displayed.
  Pictures are deleted by selecting [Yes].

Selecting the Recording Mode

■ **To select a Recording Mode with the mode dial**

Select the mode by rotating the mode dial.

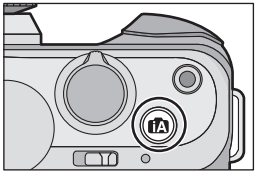
• Rotate the mode dial slowly to select the desired mode Ⓐ.



■ **To select Intelligent Auto Mode**

Press [iA].

- [iA] button will light up when it is switched to Intelligent Auto Mode.
- The Recording Mode selected by the mode dial is disabled while the [iA] button is lit.



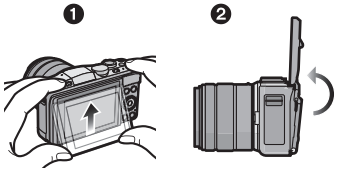
iA	**Intelligent Auto Mode**
	The subjects are recorded using settings automatically selected by the camera.
iA+	**Intelligent Auto Plus Mode**
	Allows you to adjust the brightness and color hue when in Intelligent Auto Mode.
P	**Program AE Mode**
	Records at the aperture value and shutter speed set by the camera.
A	**Aperture-Priority AE Mode**
	The shutter speed is automatically determined by the aperture value you set.
S	**Shutter-Priority AE Mode**
	The aperture value is automatically determined by the shutter speed you set.
M	**Manual Exposure Mode**
	The exposure is adjusted by the aperture value and the shutter speed which are manually adjusted.
M	**Creative Video Mode**
	Records motion pictures with a manually set aperture value and shutter speed. ✳ You cannot take still pictures.
C1 C2	**Custom Mode**
	Use this mode to take pictures with previously registered settings.
	Panorama Shot Mode
	This mode allows you to take panorama pictures.
SCN	**Scene Guide Mode**
	This mode allows you to take pictures that match the scene being recorded.
	Creative Control Mode
	Record while checking the image effect.

Taking Pictures with Yourself Included [Self Shot]

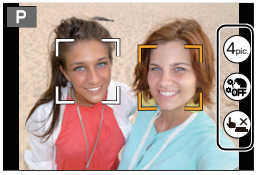
Applicable modes: iA iA+ P A S M C1 C2 SCN

When wanting to include yourself in a picture, the Self Portrait Mode is set automatically by rotating the monitor.

1 **Rotate the monitor as shown in the figure.**



2 **Touch the number of pictures to be recorded and one of the soft skin effect.**



4pic.	Number of pictures to be recorded
	Soft skin effect [OFF]([Off]), [L]([Low]), [H]([High])

- When [Silky Skin] in Scene Guide Mode is set, the soft skin effect cannot be set.
- If [ ] is touched, recording with the Touch Shutter function also becomes available.

3 **Decide on your poses while looking at the monitor.**

- The AF area is displayed around the subject's face by the Face Detection function.

4 **Press the shutter button halfway to focus and then press it fully to take the picture.**

- Countdown starts, and recording takes place when it ends. If multiple pictures are set to be recorded, the recording continues until the set number is reached.
- Look at the lens when recording.

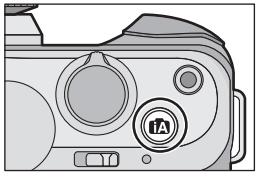
Taking Pictures using the Automatic Function

(Intelligent Auto Mode)

Recording Mode: [iA] [iA+]

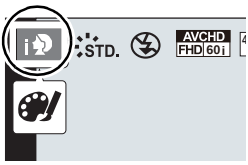
In this mode, the camera makes the optimal settings for the subject and scene, so we recommend it when you wish to leave the settings to the camera and record without thinking about them.

1 Press [iA].



- The camera will switch to either the most recently used of Intelligent Auto Mode or Intelligent Auto Plus Mode. At the time of purchase, the mode is set to Intelligent Auto Mode.
- [iA] button is turned off when it is pressed again, and it will be set to the Recording Modes selected by the mode dial.

2 Align the screen with the subject.



- When the camera identifies the optimum scene, the icon of the scene concerned is displayed in blue for 2 seconds, after which its color changes to the usual red. Depending on the identified scene, the camera may display [], which allows you to select the camera-recommended effects.
- When the subject is touched, AF Tracking function works. It is also possible by pressing the cursor button towards ◄, and then pressing the shutter button halfway.

Taking a picture with a blurred background (Defocus Control)

You can easily set the blurriness of the background while checking the screen.

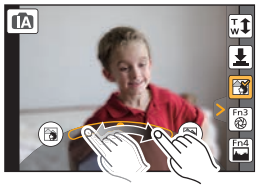
1 **Touch [].**

2 **Touch [] to display the setting screen.**

3 **Drag the slide bar to set.**

4 **Record pictures or motion pictures.**

- Defocus Control operation can be ended by touching [].
- It is also possible to record a picture by touching [].



Recording images by changing the brightness or color tone (Intelligent Auto Plus Mode)

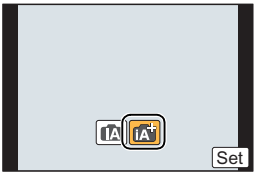
Recording Mode:

This mode enables you to change the brightness and color tone to your preferred settings from the ones set by the camera in Intelligent Auto Mode.

1 Press [MENU/SET] when in Intelligent Auto Mode.

2 Touch [iA MODE].

3 Select [ ] and then touch [Set].



Setting brightness

1 **Touch [ ].**

2 **Touch [ ] to display the setting screen.**

3 **Drag the slide bar to set.**

- This will adjust the brightness of the image.
- Touch [ ] again to return to the recording screen.

Setting color

1 **Touch [ ].**

2 **Touch [ ] to display the setting screen.**

3 **Drag the slide bar to set.**

- This will adjust the color of the image from a reddish color to a bluish color.
- Touch [ ] again to return to the recording screen.

Taking panorama pictures (Panorama Shot Mode)

Recording Mode:

Pictures are recorded continuously while moving the camera horizontally or vertically, and are combined to make a single panorama picture.

1 Set the mode dial to [ ].

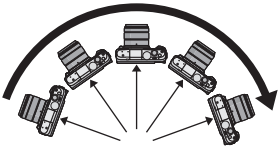
2 Check the recording direction, and then touch [Start].

- A horizontal/vertical guide is displayed.

3 Press the shutter button halfway to focus.

4 Press the shutter button fully and move the camera in a small circle in the direction of the arrow on the screen.

Recording from left to right



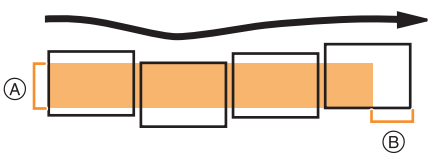
- Move the camera at a constant speed. Pictures may not be able to be recorded properly if the camera is moved too fast or slow.

Ⓐ Recording direction and panning (Guide)

5 Press the shutter button once again to end the still picture recording.

- Recording can also be ended by keeping the camera still while recording.
- Recording can also be ended by moving the camera to the end of the guide.

■ Technique for Panorama Shot Mode



Ⓐ Move the camera in the recording direction without shaking it. If the camera shakes too much, pictures may not be able to be recorded, or the recorded panorama picture may become narrower (smaller).

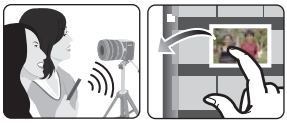
Ⓑ Move the camera towards the edge of the range you wish to record. (The edge of the range will not be recorded in the last frame)

What you can do with the Wi-Fi® function

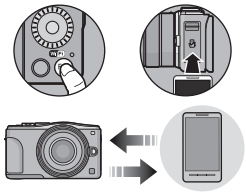
What you can do

Controlling with a Smartphone/Tablet

Recording with a smartphone.
Saving images stored in the camera.
Sending images to an SNS.



Easy connection, easy transfer
A connection can be easily established by pressing and holding [Wi-Fi] or by using the NFC function.
You can also transfer images easily.



Displaying pictures on a TV

When sending images to Printer

When sending images to AV device

You can send pictures and motion pictures to AV devices in your house (home AV devices). You can also send them to the devices (external AV devices) of your family or friends living away from you via “LUMIX CLUB”.

When sending images to PC

Using Web services

You can send pictures and motion pictures to an SNS, etc. via “LUMIX CLUB”. By setting up automatic transfers of pictures and motion pictures to the [Cloud Sync. Service], you can receive the transferred pictures or motion pictures on a PC or smartphone.

• Please refer to “Owner’s Manual for advanced features (PDF format)” for details.

Controlling with a Smartphone/Tablet

Installing the smartphone/tablet app "Panasonic Image App"

The "Image App" is an application provided by Panasonic.

	For Android™ apps	For iOS apps
Version	**1.5 or higher**	
OS	**Android 2.2~Android 4.2***	**iOS 4.3~iOS 6.1**
Installation procedure	**1 Connect your Android device to a network.** **2 Select "Google Play™ Store".** **3 Enter "Panasonic Image App" into the search box.** **4 Select "Panasonic Image App" and install it.** • The icon will be added to the menu.	**1 Connect the iOS device to the network.** **2 Select "App Store℠".** **3 Enter "Panasonic Image App" into the search box.** **4 Select "Panasonic Image App" and install it.** • The icon will be added to the menu.

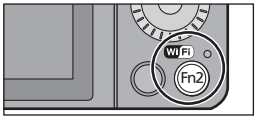
• The service may not be able to be used properly depending on the type of smartphone/tablet being used. For information on the Image App, refer to the support site below.
http://panasonic.jp/support/global/cs/dsc/ (This Site is English only.)
• When downloading the app on a mobile network, high packet communication fees may be incurred depending on the details of your contract.
* Connecting to this unit with [Wi-Fi Direct] requires Android OS 4.0 or higher and Wi-Fi Direct™ support.

Connecting to a smartphone/tablet

Preparations:

• Install the "Image App" in advance. (P29)

1 Press and hold [Wi-Fi].
- The information (SSID and password) required for directly connecting your smartphone/tablet to this unit is displayed.
- Except for when connecting for the first time, the screen from the previous connection is displayed.



2 **Operate the smartphone/tablet.**

❶ Turn on the Wi-Fi function.
❷ Select the SSID that matches the one displayed on the screen of this unit, and then enter the password.
❸ Start “Image App”. (P29)
- When the connection is complete, live images being captured by the camera are displayed on the smartphone/tablet.

Connecting to a smartphone/tablet by using the NFC function

Using the NFC “Near Field Communication” function, you can easily transfer data necessary for a Wi-Fi connection between this camera and the smartphone/tablet.

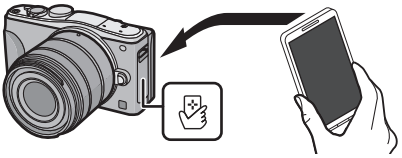
■ Compatible models
This function can be used with the NFC compatible device with Android (OS version 2.3.3 or higher). (excluding some models)

Preparation:

(On the camera)	(On your smartphone/tablet)
• Set [NFC Operation] to [ON]. • Set [Touch Sharing] to [ON].	• Check that your smartphone/tablet is a compatible model. • Turn on the Wi-Fi function. • Install the “Image App” in advance. (P29)

1 **Launch “Image App” on your smartphone/tablet.**
- The screen for selecting the connection destination is displayed after the launch.

2 **While [ ] is displayed on the connection screen of the “Image App”, touch the smartphone/tablet to [ ] of this unit.**
- It may take time to complete the connection.
- When the smartphone/tablet has connected, an image of this camera will be displayed on the smartphone/tablet.
- If a connection attempt by touching fails, restart the “Image App”, and then display the screen in step ***1*** again.



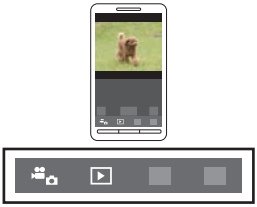
When connecting for the first time, the connection confirmation screen is displayed

1 **When the connection confirmation screen is displayed on this unit, select [Yes].**
2 **Touch the smartphone/tablet to [ ] of the camera again.**
- The connected smartphone/tablet is registered to this camera.

Taking pictures via a smartphone/tablet (remote recording)

1 Connect to a smartphone/tablet. (P29)

2 Select [ ] on the smartphone/tablet.



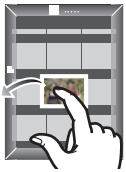
- The recorded images are saved in the camera.
- Motion pictures can also be recorded.
- Some settings are not available.
- When this unit is in Panorama Shot Mode, remote recording cannot be performed.
- The screen differs depending on the operating system.

Saving images stored in the camera/ Sending images in the camera to an SNS

1 Connect to a smartphone/tablet. (P29)

2 Select [ ] on a smartphone/tablet.

3 Drag an image.



- The function can be assigned to the top, bottom, left or right according to your preference.
- If an image is touched, the picture will be played back in an enlarged size. (Motion pictures cannot be played back.)

Transferring/saving images stored in the camera easily with NFC

1 Play back the picture you want to transfer to the smartphone/tablet in the camera.

2 Launch "Image App" on the smartphone/tablet at the transfer destination.

- The screen for selecting the connection destination is displayed after the launch.

3 While [ ] is displayed on the connection screen of the "Image App", touch the smartphone/tablet to [ ] of this unit.

- It may take time to complete the connection.
- If a connection attempt by touching fails, restart the "Image App", and then display the screen in step ***2*** again.
- When transferring multiple images, repeat steps ***1*** and ***3***. (They cannot be transferred as a batch)

About the supplied software

The supplied CD-ROM includes the following software.
Install the software on to your computer before use.

- **PHOTOfunSTUDIO 9.2 AE (Windows XP/Vista/7/8)**
  This software allows you to manage images. For example, you can send pictures and motion pictures to a PC and sort them by recording date or model name. You can also perform operations such as writing images to a DVD, processing and correcting images, and editing motion pictures.

- **SILKYPIX Developer Studio**
  (Windows XP/Vista/7/8, Mac OS X v10.4/v10.5/v10.6/v10.7/v10.8)
  This is software to edit RAW format images.
  Edited images can be saved in a format (JPEG, TIFF, etc.) that can be displayed on a personal computer.

For details on how to use the SILKYPIX Developer Studio, refer to the "Help" or the Ichikawa Soft Laboratory's support website:
http://www.isl.co.jp/SILKYPIX/english/p/support/

- **LoiLoScope 30 day full trial version (Windows XP/Vista/7/8)**
  LoiLoScope is a video editing software where that draws out the full power of your PC. Creating videos is as easy as organizing cards on top of a desk. Use your music, picture and video files to create videos to share with your friends and family by burning it to a DVD, uploading it to websites, or simply share your videos with your friends via e-mail.
  – This will only install a shortcut to the trial version download site.

For more information on how to use LoiLoScope, read the LoiLoScope manual available for download at the link below.
Manual URL: http://loilo.tv/product/20

■ Installing supplied software

• Before inserting the CD-ROM, close all running applications.

1 Check the environment of your PC.

- **Operating environment of "PHOTOfunSTUDIO 9.2 AE"**
  - OS:
    Windows® XP (32bit) SP3,
    Windows Vista® (32bit) SP2,
    Windows® 7 (32bit/64bit) or SP1,
    Windows® 8 (32bit/64bit)
  - CPU:
    Pentium® III 500 MHz or higher (Windows® XP),
    Pentium® III 800 MHz or higher (Windows Vista®),
    Pentium® III 1 GHz or higher (Windows® 7/Windows® 8)
  - Display:
    1024×768 pixels or more (1920×1080 pixels or more recommended)
  - RAM:
    512 MB or more (Windows® XP/Windows Vista®),
    1 GB or more (Windows® 7 32bit/Windows® 8 32bit),
    2 GB or more (Windows® 7 64bit/Windows® 8 64bit)
  - Free hard disk space:
    450 MB or more for installing software
- Refer to the operating instructions of "PHOTOfunSTUDIO" (PDF) for further operating environment.
- For details on SILKYPIX Developer Studio 3.1 SE, please read the support site given on P32.

2 Insert the CD-ROM with the supplied software.

- When you insert the supplied CD-ROM, the install menu will start.

3 Click on the [Recommended Installation].

- Proceed with installation according to messages appearing on the screen.

• The software compatible with your PC will be installed.
• On the Mac, SILKYPIX can be installed manually.

❶ Insert the CD-ROM with the supplied software.
❷ Double-click on the automatically displayed folder.
❸ Double-click the icon in the application folder.

Not available in these cases:

• "PHOTOfunSTUDIO" and "LoiLoScope" are not compatible with Mac.

Menu list

[Rec]

This menu lets you set the aspect ratio, number of pixels and other aspects of the pictures you are recording.

• [Photo Style], [Sensitivity], [Focus Mode], [Metering Mode], [i.Dynamic], [i.Resolution] and [Digital Zoom] are common to both the [Rec] menu and [Motion Picture] menu. Changing these settings in one of these menus is reflected in other menu.

[Photo Style]	You can select effects to match the type of image you wish to record. You can adjust the color and image quality of the effects.
[Aspect Ratio]	Sets the aspect ratio of the image.
[Picture Size]	Set the number of pixels.
[Quality]	Set the compression rate at which the pictures are to be stored.
[Sensitivity]	This allows the sensitivity to light (ISO sensitivity) to be set.
[Focus Mode]	Sets the focus method.
[Metering Mode]	Sets the light metering method for measuring brightness.
[Burst Rate]	Sets the burst speed for burst recording.
[Auto Bracket]	Sets single/burst recording, compensation range and recording sequence for Auto Bracket recording.
[Self Timer]	Set the time delay for the self-timer recording.
[i.Dynamic] (Intelligent dynamic range control)	Adjusts the contrast and exposure.
[i.Resolution]	Records pictures with more defined outlines and sense of clarity.
[HDR]	You can combine 3 pictures with different levels of exposure into a single picture with rich gradation.
[Stop Motion Animation]	A stop motion picture is created by splicing pictures together.
[Panorama Settings]	Sets the recording direction and image effect for panorama recording.
[Flash]	Sets the manner in which the flash works.
[Red-Eye Removal]	Automatically detects red-eye caused by the flash and corrects the image data accordingly.

[ISO Limit Set]	When the ISO sensitivity is set to [AUTO] or [ISO], an optimal ISO sensitivity is set with the selected value as an upper limit.
[ISO Increments]	The ISO sensitivity settings values changes in steps of 1/3 EV or 1 EV.
[Extended ISO]	ISO sensitivity can be set up to maximum [ISO25600].
[Long Shtr NR]	You can eliminate the noise caused by recording with a slower shutter speed.
[Shading Comp.]	If the screen periphery darkens as a result of lens characteristics, the brightness in this region will be corrected.
[Ex. Tele Conv.]	When the number of pixels is set to anything other than [L], the Tele effect is increased without degradation in image quality.
[Digital Zoom]	Increases the Tele effect. The higher the level of magnification, the greater the degradation in image quality.
[Color Space]	Set this when you want to correct the color reproduction of the recorded pictures on a PC, printer etc.
[Stabilizer]	When camera shake is sensed during recording, the camera corrects it automatically.
[Face Recog.]	Sets the focus and exposure automatically prioritizing registered faces.
[Profile Setup]	If you set the name and birthday of your baby or pet in advance, you can record their name and age in months and years in the images.
[Recommended Filter]	This sets whether to display the camera-recommended effects (filters) in Intelligent Auto (or) Mode.

[Motion Picture]

This menu lets you set the [Rec Format], [Rec Quality], and other aspects for motion picture recording.

- [Photo Style], [Sensitivity], [Focus Mode], [Metering Mode], [i.Dynamic], [i.Resolution] and [Digital Zoom] are common to both the [Rec] menu and [Motion Picture] menu. Changing these settings in one of these menus is reflected in other menu.
  – For details, refer to the explanation for the corresponding setting in the [Rec] menu.

[Rec Format]	Sets the file format for the motion pictures you record.
[Rec Quality]	This sets up the picture quality of motion pictures.
[Exposure Mode]	Select the method for setting the aperture value and shutter speed in Creative Video Mode.
[Picture Mode]	Sets the recording method for still pictures during motion picture recording.
[Continuous AF]	Continues to focus on the subject for which focus has been achieved.
[Ex. Tele Conv.]	Increases the Tele effect.
[Flkr Decrease]	The shutter speed can be fixed to reduce the flicker or striping in the motion picture.
[Silent Operation]	Enables touch operations to allow silent use while recording motion pictures.
[Mic Level Disp.]	Set whether or not the mic levels are displayed on the screen.
[Mic Level Adj.]	Adjust the sound input level to 4 different levels.
[Wind Cut]	This prevents the recording of wind-noise automatically.

[Custom]

Operation of the unit, such as displaying of the screen and button operations, can be set up according to your preferences. Also, it is possible to register the modified settings.

[Cust.Set Mem.]	Registers the current camera settings as custom set.
[AF/AE Lock]	Sets the fixed content for focusing and exposure when the AF/AE lock is on.
[Quick AF]	Speeds up the focusing that takes place when you press the shutter button.
[Pinpoint AF Time]	Sets the time for which the screen is enlarged when the shutter button is pressed halfway with Auto Focus Mode set to [⊞].

[AF Assist Lamp]	AF assist lamp will illuminate the subject when the shutter button is pressed half-way making it easier for the camera to focus when recording in low light conditions.
[Focus/Release Priority]	It will set so no picture can be taken when it is out of focus.
[AF+MF]	You can set the focus manually after the automatic focus has finished.
[MF Assist]	Sets the display method of MF Assist (enlarged screen).
[MF Guide]	When you set the focus manually, an MF guide that allows you to check the direction to achieve focus is displayed.
[Histogram]	This allows you to set either to display or not display the histogram.
[Guide Line]	This will set the pattern of guide lines displayed when taking a picture.
[Highlight]	When the Auto Review function is activated or when playing back, white saturated areas appear blinking in black and white.
[Expo.Meter]	Set whether or not to display the exposure meter.
[Dial Guide]	Set whether or not to display the dial operation guide.
[Rec Area]	This changes the angle of view during motion picture recording and still picture recording.
[Remaining Disp.]	This will switch display between the number of recordable pictures and available recording time.
[Auto Review]	Set the length of time that the picture is displayed after taking the still picture.
[Fn Button Set]	You can assign various recording and other functions to the function button.
[Function Lever]	You can set the function to assign to the function lever.
[Q.MENU]	Switch the setting method of Quick Menu.
[iA Button Switch]	It is possible to set how the [iA] button to toggle to Intelligent Auto (iA or iA+) Mode will operate.
[Video Button]	Enables/disables the motion picture button.
[Power Zoom Lens]	Sets the screen display and lens operations when using an interchangeable lens that is compatible with power zoom (electrically operated zoom).
[Self Shot]	Sets whether or not to set the Self Portrait Mode by rotating the monitor.

[Self Timer Auto Off]	Sets whether or not to cancel the self-timer when this unit is turned off.
[Touch Settings]	Enables/disables the Touch operation.
[Touch Scroll]	This allows you to set the speed of continuously forwarding or rewinding pictures using touch operation.
[Menu Guide]	Set the screen that is displayed when the mode dial is set to SCN and .
[Shoot w/o Lens]	Sets whether or not the shutter can be released when no lens is attached to the main body.

[Setup]

This menu lets you perform the clock settings, select the operating beep tone settings and set other settings which make it easier for you to operate the camera.
You can also configure the settings of Wi-Fi related functions.

[Clock Set]	Setting Date/Time.
[World Time]	Sets the times for the region where you live and your holiday destination.
[Travel Date]	Departure date and return date of the trip as well as the name of the travel destination can be set.
[Wi-Fi]	Configure the each setting for Wi-Fi functions.
[Beep]	Set the volume for electronic noises and the electronic shutter noise.
[Speaker Volume]	Adjust the volume of the speaker to any of 7 levels.
[Monitor Display]	Brightness, color, or red or blue tint of the Monitor is adjusted.
[Monitor Luminance]	Set the monitor brightness to suit the amount of surrounding light.
[Economy]	Suppresses the unit's power consumption to prevent the battery from being run down.
[USB Mode]	Sets the communication method when connecting using the USB connection cable (supplied).
[Output]	This sets how the unit connects to a television etc.
[VIERA Link]	Equipment that supports the VIERA Link will connect automatically.
[3D Playback]	Set the output method for 3D pictures.

[Menu Resume]	Stores the location of the last-used menu item for each menu.
[Menu Background]	Set the background color for the menu screen.
[Menu Information]	Descriptions of menu items or their settings are displayed on the menu screen.
[Language]	Set the language displayed on the screen.
[Version Disp.]	This enables the firmware versions of the camera and lens to be checked.
[No.Reset]	Returns the image file number to 0001.
[Reset]	The recording or setup/custom menu settings are reset to the default.
[Reset Wi-Fi Settings]	Reset all settings in the [Wi-Fi] menu to factory default settings. (excluding [LUMIX CLUB])
[Pixel Refresh]	It will perform optimization of imaging device and image processing.
[Sensor Cleaning]	Dust reduction to blow off the debris and dust that have affixed to the front of the imaging device is performed.
[Format]	The card is formatted.

[Playback]

This menu lets you set the Protection, Cropping or Print Settings, etc. of recorded pictures.

[2D/3D Settings]	Switches the playback method for 3D images.
[Slide Show]	Selects the type etc. of the images and plays back in order.
[Playback Mode]	Selects the type etc. of the images and plays back only particular images.
[Location Logging]	The location information (longitude/latitude) acquired by the smartphone/tablet can be sent to the camera and written in images.
[Clear Retouch]	You can erase unnecessary parts recorded on the pictures taken.
[Title Edit]	Input texts (comments) on the recorded pictures.
[Text Stamp]	Stamps the recorded pictures with recording date and time, names, travel destination, travel date, etc.
[Video Divide]	Splits the recorded motion picture in two.
[Stop Motion Video]	Creates a motion picture from the Stop Motion Animation group.
[Resize]	Reduces the image size (number of pixels).
[Cropping]	Crops the recorded image.
[Rotate]	Rotate pictures manually in 90° steps.
[Rotate Disp.]	This mode allows you to display pictures vertically if they were recorded holding the camera vertically.
[Favorite]	Marks can be added to images, and images can be set as favorites.
[Print Set]	Sets the images for printing and the number of prints.
[Protect]	Protects images to prevent deletion by mistake.
[Face Rec Edit]	Removes or changes information relating to personal identity.
[Delete Confirmation]	This sets which option, [Yes] or [No], will be highlighted first when the confirmation screen for deleting a picture is displayed.

Specifications

Specifications are subject to change without notice.

Digital Camera Body (DMC-GF6):
Information for your safety

Power Source:	DC 8.4 V
Power Consumption:	2.4 W (When recording) [When the Interchangeable lens (H-FS1442A) is used] 2.1 W (When playing back) [When the Interchangeable lens (H-FS1442A) is used]

Camera effective pixels	16,000,000 pixels
Image sensor	4/3″ Live MOS sensor, total pixel number 16,680,000 pixels, Primary color filter
Digital Zoom	Max. 4×
Extended Tele Conversion	When taking still pictures: Max. 2× (When a picture size of [S] (4 M), aspect ratio of [4:3] is selected.) When recording motion pictures: 3.6×/4.8×
Focus	Auto Focus/Manual Focus, Face Detection/AF Tracking/23-area-focusing/ 1-area-focusing/Pinpoint (Touch focus area selection possible)
Shutter system	Focal-plane shutter
Burst recording	
Burst speed	20 pictures/second (Super high speed), 4.2 pictures/second (High speed), 3 pictures/second (Middle speed), 2 pictures/second (Low speed)
Number of recordable pictures	Max.7 pictures (when there are RAW files) Depends on the capacity of the card (when there are no RAW files)

ISO sensitivity (Standard Output Sensitivity)	AUTO/ISO/160/200/400/800/1600/3200/6400/12800/25600* (1/3 EV step change possible) * Only available when [Extended ISO] is set.
Minimum Illumination	Approx. 9 lx (when i-Low light is used, the shutter speed is 1/30th of a second) [When the Interchangeable lens (H-FS1442A) is used]
Shutter speed	60 seconds to 1/4000th of a second Taking still pictures during motion picture recording: Motion picture priorities: 1/30th of a second to 1/16000th of a second Still picture priorities: 60 seconds to 1/4000th of a second
Metering range	EV 0 to EV 18
White Balance	Auto White Balance/Daylight/Cloudy/Shade/Incandescent lights/Flash/White set1/White set2/White Balance K set
Exposure (AE)	Program AE (P)/Aperture-priority AE (A)/Shutter-priority AE (S)/Manual exposure (M)/AUTO Exposure Compensation (1/3 EV Step, −3 EV to +3 EV)
Metering Mode	Multiple/Center weighted/Spot
Monitor	3.0″ TFT LCD (3:2) (Approx. 1,040,000 dots) (field of view ratio about 100%) Touch screen
Flash	Built-in pop up flash GN 6.3 equivalent (ISO160·m) [GN 5.0 equivalent (ISO100·m)] Flash range: Approx. 1.0 m (3.3 feet) to 5.7 m (19 feet) [When the Interchangeable lens (H-FS1442A) is mounted, WIDE, [ISO AUTO] is set] AUTO, AUTO/Red-Eye Reduction, Forced ON, Forced ON/Red-Eye Reduction, Slow Sync., Slow Sync./Red-Eye Reduction, Forced OFF

Flash synchronization speed	Equal to or smaller than 1/160th of a second	
Microphone	Stereo	
Speaker	Monaural	
Recording media	SD Memory Card/SDHC Memory Card*/SDXC Memory Card* (* UHS-I-compatible)	
Picture size		
Still picture	When the aspect ratio setting is [4:3] 4592×3448 pixels, 3232×2424 pixels, 2272×1704 pixels When the aspect ratio setting is [3:2] 4592×3064 pixels, 3232×2160 pixels, 2272×1520 pixels When the aspect ratio setting is [16:9] 4592×2584 pixels, 3232×1824 pixels, 1920×1080 pixels When the aspect ratio setting is [1:1] 3424×3424 pixels, 2416×2416 pixels, 1712×1712 pixels	
Recording quality		
Motion pictures	[AVCHD] 1920×1080/60i* (17 Mbps)/1280×720/60p* (17 Mbps) (*Sensor output is 30 frames/sec.) [MP4] 1920×1080/30p (20 Mbps)/1280×720/30p (10 Mbps)/ 640×480/30p (4 Mbps)	
Quality	RAW/RAW+Fine/RAW+Standard/Fine/Standard/MPO+Fine/MPO+Standard	
Recording file format		
Still Picture	RAW/JPEG (based on “Design rule for Camera File system”, based on “Exif 2.3” standard, DPOF corresponding)/MPO	
Motion pictures	AVCHD/MP4	
Audio compression	AVCHD	Dolby® Digital (2 ch)
	MP4	AAC (2 ch)
Interface		
Digital	“USB 2.0” (High Speed)	
Analog video/audio	NTSC Audio line output (monaural)	
Terminal		
[AV OUT/DIGITAL]	Dedicated jack (8 pin)	
[HDMI]	MiniHDMI TypeC	

Dimensions	Approx. 111.2 mm (W)×64.8 mm (H)×38.4 mm (D) [4.378″ (W)×2.551″(H)×1.512″ (D)] (excluding the projecting parts)
Mass (weight)	Approx. 323 g/0.712 lb [with the card and battery] Approx. 281 g/0.619 lb (camera body) Approx. 432 g/0.95 lb [with the Interchangeable lens (H-FS1442A), card and battery]
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity	10%RH to 80%RH
Language select	[ENGLISH]/[ESPAÑOL]

Wireless transmitter

Compliance standard	IEEE 802.11b/g/n (standard wireless LAN protocol)
Frequency range used (central frequency)	2412 MHz to 2462 MHz (1 to 11ch)
Encryption method	Wi-Fi compliant WPA™/WPA2™
Access method	Infrastructure mode

Battery Charger (Panasonic DE-A99B):
Information for your safety

Input:	~110 V to 240 V, 50/60 Hz, 0.15 A
Output:	⎓8.4 V, 0.43 A

Equipment mobility:
Movable

Battery Pack (lithium-ion) (Panasonic DMW-BLG10PP):
Information for your safety

Voltage/capacity:	7.2 V/1025 mAh

Interchangeable Lens (H-FS1442A)
“LUMIX G VARIO 14–42 mm/F3.5–5.6 II ASPH./MEGA O.I.S.”

Focal length	f=14 mm to 42 mm (35 mm film camera equivalent: 28 mm to 84 mm)
Aperture type	7 diaphragm blades/circular aperture diaphragm
Aperture range	F3.5 (Wide) to F5.6 (Tele)
Minimum aperture value	F22
Lens construction	9 elements in 8 groups (2 aspherical lenses)
In focus distance	0.2 m (0.66 feet) to ∞ (from the focus distance reference line) (focal length 14 mm to 20 mm), 0.3 m (0.98 feet) to ∞ (from the focus distance reference line) (focal length 21 mm to 42 mm)
Maximum image magnification	0.17× (35 mm film camera equivalent: 0.34×)
Optical Image Stabilizer	Available
[O.I.S.] switch	None (Setting of the [Stabilizer] is done in [Rec] menu.)
Mount	“Micro Four Thirds Mount”
Angle of view	75° (Wide) to 29° (Tele)
Filter diameter	46 mm (1.81 inch)
Max. diameter	Approx. 56 mm (2.21 inch)
Overall length	Approx. 49 mm (1.93 inch) (from the tip of the lens to the base side of the lens mount)
Mass (weight)	Approx. 110 g/0.24 lb

Digital Camera Accessory System

Description	Accessory#
Lithum Ion Battery	DMW-BLG10
AC Adaptor*1	DMW-AC8
DC Coupler*1	DMW-DCC11
Flash*2	DMW-FL360L
Body Cap	DMW-BDC1
Tripod Adaptor*3	DMW-TA1
USB connection Cable	DMW-USBC1
AV Cable	DMW-AVC1
HDMI mini Cable	RP-CHEM15, RP-CHEM30
Mount Adaptor	DMW-MA1, DMW-MA2M, DMW-MA3R

*1 The AC Adaptor (optional) can only be used with the designated Panasonic DC Coupler (optional). The AC adaptor (optional) cannot be used by itself.
*2 Using it by attaching it to the hot shoe is not possible. Using it as a wireless flash is possible.
*3 Use if the attached lens is in contact with the tripod pedestal.

Product numbers correct as of March 2013. These may be subject to change.
- Some optional accessories may not be available in some countries.
- NOTE: Accessories and/or model numbers may vary between countries. Consult your local dealer.
- For lens-related optional accessories such as compatible lenses and filters, refer to catalogs/ Web pages, etc.

Digital Camera Accessory Order Form

(For USA and Puerto Rico Customers)

Please photocopy this form when placing an order.

1. Digital Camera Model # _____

2. Items Ordered

Accessory #	Description	Price Each	Quantity	Total Price
			Shipping & Handling	$6.95
			Subtotal	
			Your State & Local Sales Tax	
			Total	

3. Method of payment (check one)

☐ American Express

☐ VISA Credit Card # _____

☐ MasterCard Expiration Date _____

☐ Discover Customer Signature _____

(Please do not send cash)

4. Shipping information (UPS delivery requires complete street address)

Ship To:
Mr.
Mrs.
Ms. _____
First Last

_____
Street Address

_____ _____ _____
City State Zip

Phone#:
Day ( ) _____
Night ( ) _____

TO OBTAIN ANY OF OUR DIGITAL CAMERA ACCESSORIES YOU CAN DO ANY OF THE FOLLOWING:
VISIT YOUR LOCAL PANASONIC DEALER
OR
CALL PANASONIC'S ACCESSORY ORDER LINE AT 1-800-332-5368
[6 AM-6 PM M-F, PACIFIC TIME]
OR
MAIL THIS ORDER TO: PANASONIC NATIONAL PARTS CENTER
20421 84th Ave S., Kent, WA 98032

Limited Warranty (ONLY FOR U.S.A. AND PUERTO RICO)

Panasonic Consumer Marketing Company of North America,
Division of Panasonic Corporation of North America
One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Products Limited Warranty

Limited Warranty Coverage (For USA and Puerto Rico Only)
If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Marketing Company of North America (referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, (b) replace it with a new or a refurbished equivalent value product, or (c) refund your purchase price. The decision to repair, replace or refund will be made by the warrantor.

Product or Part Name	Parts	Labor
Digital Camera	1 Year	1 Year
All included Accessories (Except Non-Rechargeable Batteries)	90 Days	Not Applicable
Only Non-Rechargeable Batteries	10 Days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. This Limited Warranty excludes both parts and labor for non-rechargeable batteries, antennas, and cosmetic parts (cabinet). This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is".

Mail-In Service
For assistance in the U.S.A. and Puerto Rico in obtaining repairs, please ship the product prepaid to:

Panasonic Exchange Center
4900 George McVay Drive
Suite B
McAllen, TX 78503
panacare@us.panasonic.com

Online Repair Request
To submit a new repair request and for quick repair status visit our web site at:
www.panasonic.com/repair.

When shipping the unit, carefully pack, include all supplied accessories listed in the Owner's Manual, and send it prepaid, adequately insured and packed well in a carton box. When shipping Lithium Ion batteries please visit our Web Site at www.panasonic.com/BatteryHandling as Panasonic is committed to providing the most up to date information. Include a letter detailing the complaint, a return address and provide a daytime phone number where you can be reached. A valid registered receipt is required under the Limited Warranty.

IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD, THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty Limits And Exclusions
This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a Factory Service Center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".
THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.
(As examples, this excludes damages for lost time, travel to and from the servicer, loss of or damage to media or images, data or other memory or recorded content. The items listed are not exclusive, but for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.
PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

Customer Services Directory (United States and Puerto Rico)

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Service Center; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:
http://www.panasonic.com/help
or, contact us via the web at:
http://www.panasonic.com/contactinfo
You may also contact us directly at:
1-800-211-PANA (7262)
Monday-Friday 9am-9pm, Saturday-Sunday 10am-7pm EST

For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Accessory Purchases (United States and Puerto Rico)

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:
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